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**Hazards
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Australia



Queensland Government
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Evaluating the QLD Resilient Homes Fund and NSW Resilient Homes Program

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Research partners



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Making homes more flood resilient

→ **The problem:**

- Homes built in flood zones have mass individual and societal costs to Australia
- 2022 catastrophic flooding throughout QLD and parts of NSW had social, financial and economic impacts in QLD of ~ \$7.7 billion and in NSW ~ \$6 billion
- QLD: 18,000 homes and businesses affected; NSW: 4,055 properties uninhabitable, 10,849 properties damaged and 8,100 inundated

→ **The policy:**

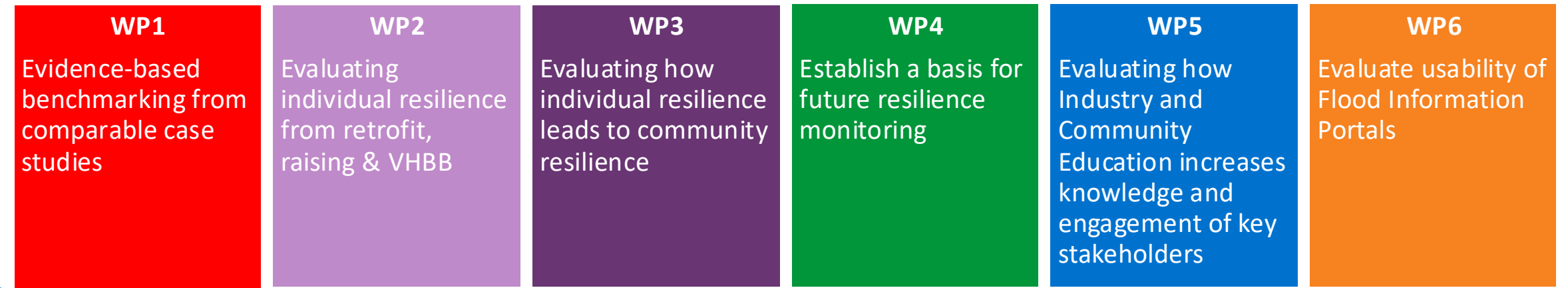
- Buy back, retrofit and raising to make homes more flood resilient
- QLD: \$750 million Resilient Homes Fund; NSW \$880 million in Northern Rivers and \$40 million in Central West.

→ **Why this is important**

- Meet reporting requirements, generate deep understanding of challenges and enablers, develop guidelines for current and future programs, build an **evidence-based legacy** for future policy



Two-year program of research with six work packages



- Individual physical, financial, emotional & social resilience
- Community resilience framework
- Basis for post-program resilience monitoring



WP1: Evidence-based benchmarking from comparable case studies

Purpose and design of WP1:

Examines the delivery of resilient housing programs in different local contexts, gathering lessons learned, and developing these lessons into a set of considerations for future policy and practice.

The design and delivery of seven resilient housing programs to address flood, tropical storm, and earthquake were analysed.

This analysis is developed into a set of key enablers and trade-offs involved in implementing government-sponsored resilience programs.

Understanding global experience in implementing resilient housing programs provides valuable practical learnings and insights for Australian local, state and federal governments.



Selection of seven global case studies

PROGRAM	YEAR	STATUS	WEATHER EVENT	PROGRAM TYPE	SCALE
Grantham Relocation Policy (Australia)	2011	Completed	Flood	Relocation	72 relocations completed
Brisbane: Flood Resilient Homes Program (Australia)	2018	Completed	Flood	Retrofit	199 homes participated in this small selective pilot program.
Christchurch Residential Red Zone (New Zealand)	2011	Completed	Earthquake	Buy-back	7,900 buy-backs completed (98% of 8060 eligible homes).
Flood Re's Build Back Better (UK)	2022	Ongoing	Flood	Retrofit	No data available.
The State of North Carolina: 1990s hurricane and storm response (USA)	1999	Completed	Flood	Buy-back and raising	Purchased or relocated more than 5,000 homes. Raised 1,000 homes.
The State of New Jersey: Superstorm Sandy (USA)	2012	Some streams are ongoing	Flood	Buy-back, retrofit and raising	Data on the number of retrofit homes is unclear. Incentive to stay for 18,500 homes. Purchased 770 properties. Repaired 5,299 multi-family homes.
Restore Louisiana Homeowner Assistance Program (USA)	2023	Ongoing	Flood	Buy-back, retrofit and raising	39,100 applicants. 23,700 eligible homes. \$380 million delivered to 4,846 homes.



Key learnings about program success: enablers

Implementing resilience programs requires

- i) extensive knowledge of housing stock and its exposure to specified hazards
- ii) access to data on affected individuals
- iii) clear procedures for identifying and mobilizing the target population for the program

Challenges?

Two key types of enabling policies:

- i) **a continuing disaster resilience program that can be easily activated**
- ii) **a government-based insurance program such as Toka Tu Ake, New Zealand's earthquake insurance program**



Example of a raised home in South-East Queensland.
Author's own photo.



Key learnings about program success: trade-offs

Two key trade-offs between:

i) Collective and individual approaches to working with the target population.

Collective approaches to whole communities enable many properties to be targeted simultaneously in a timely and consistent manner. For example, Grantham and Christchurch

Individual, property-by-property approaches give homeowners time and autonomy to engage with decisions about what is often their most valuable asset and social investment. For example, Louisiana

ii) Eligibility and equity of access to the program.

Eligibility criteria may focus on equal access, being available to all properties affected to a specified level of damage. Hence, equity-based eligibility may prioritise those identified, through socioeconomic or other vulnerabilities, as having a greater need for government support. For example, prioritising lower-socioeconomic households, financial incentives to move, mortgage forgiveness, insurance premium reductions



A set of future considerations for policy

Key considerations for implementing and evaluating resilient housing programs within their own physical, financial, social and emotional contexts:

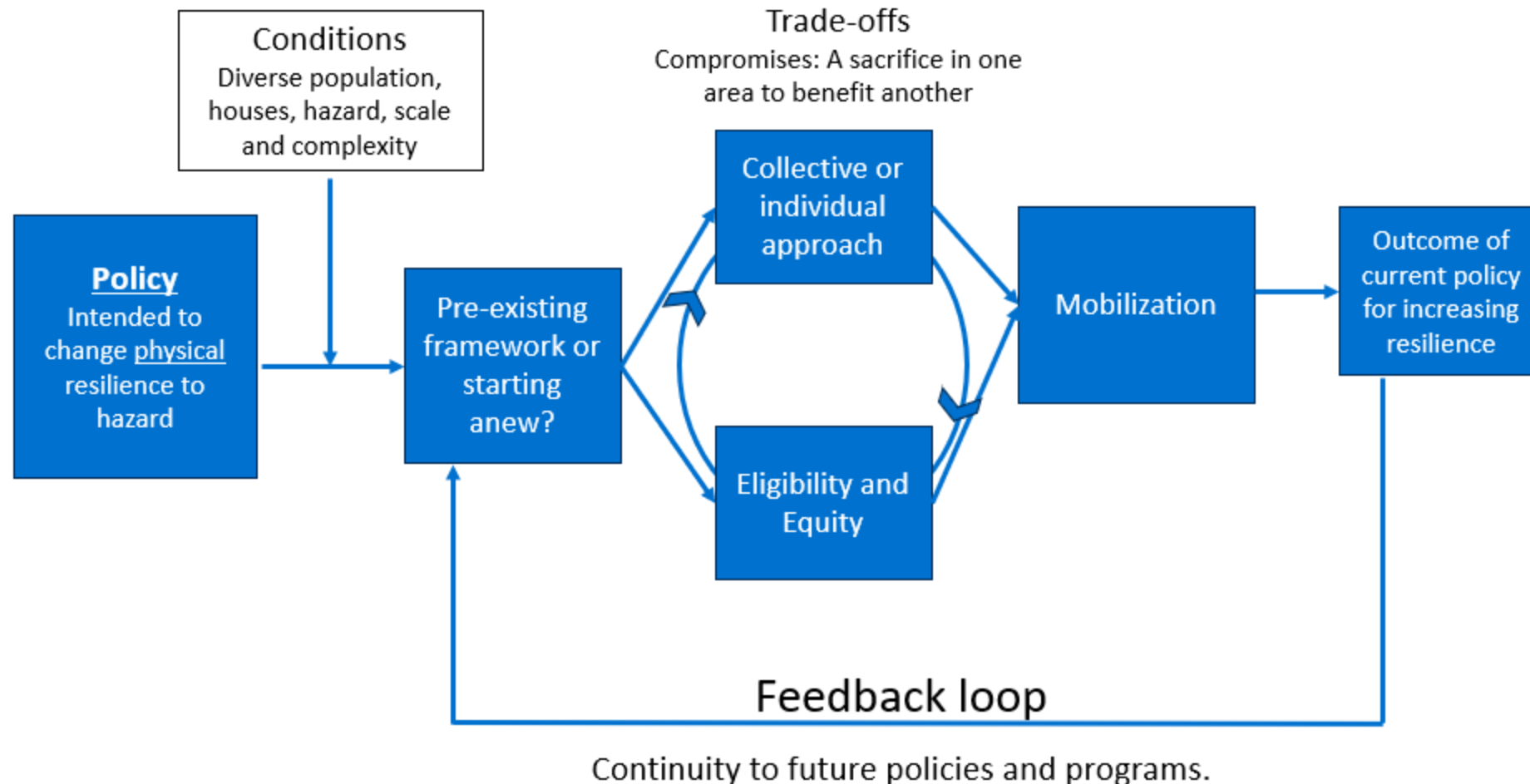
- continuing a resilience policy beyond the current recovery program is important to support a timely response to a new disaster;
- ensuring access to knowledge, data, and procedures for identifying the target population and maintaining these at the completion of any program;
- understanding the trade-offs between adopting a collective versus an individual approach to working with the target population;
- ensuring eligibility and equity of access to the program; and
- mobilisation - incentivising and supporting the target population to overcome social, emotional and financial constraints that impact uptake of the program.



Buyback in South-East Queensland. Residential land rezoned as 'environmental management and conservation'. Author's own photo.



Application of WP1 to remaining program of research: framework for evaluation



Learn more about the project here:

<https://naturalhazards.com.au/evaluating-resilient-housing-programs-australia>

